



Weekly Summary Report

USEPA Oversight, Sauget Area 2, Sauget, IL

WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday May 7, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from May 3 through May 7, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation, barrier wall trenching, and backfilling.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
Lowry Electric (electrical contractor to Solutia)
PSI (geotechnical testing subcontractor)
Pangea (subcontractor to Inquip for site maintenance)
RockHill Mechanical (pipefitting contractor to Solutia)
URS (primary consultant for Solutia)

Work Performed This Week

Work at the site continued with a crew of Inquip operators and laborers performing site and trench maintenance activities. Along the east-west leg of the trench at the southernmost section of the barrier wall, approximately eighty feet of trench was excavated during the week with either the small trackhoe or the Koehring trackhoe extending the open trench to station 6+60. Backfill was placed in the trench on three days during the week, with the daylighted backfill closing the north end of the open trench to station 19+40. The hydraulic clamshell performed trenching during the week while the mechanical clamshell was mostly inactive due to limited working space along the south arm of the trench. The mechanical rig was used primarily to clean the trench bottom and the hydraulic rig excavated the trench to a greater depth.

Groundwater Migration Control System (GMCS)

During the week, the river elevations decreased from 407.2 feet above mean sea level (amsl) on May 3 to 390.3 ft amsl on May 7. As a result, the combined flow rate of the extraction well system increased correspondingly from 960 gallons per minute (gpm) at the beginning of the week to 1,095 gpm at the end of the week.

The eight barrier wall piezometers, with four inside and four outside the barrier wall alignment, continued to monitor the groundwater water elevations adjacent to the barrier wall alignment. Table 1 shows the river and piezometer water elevations measured on May 7, 2004 (15:10 PM).

For the two pairs of piezometers located at the north and south ends of Site R (P1S/P1N and P4E/P4S), water levels measured inside the barrier wall alignment were generally within one foot lower than those measured outside the barrier wall alignment. For the two centrally located pairs of piezometers (P2E/P2W and P3E/P3W), the water elevations at the piezometers located west of the barrier wall were generally within one foot (plus or minus)

difference from those located east of the barrier wall during the week. Nevertheless, the river elevations were significantly higher than those measured at all eight piezometers throughout the week, indicating an inward groundwater flow direction toward Site R.

TABLE 1
River and Piezometer Water Elevations – May 7, 2004 (15:0 PM)

	Elevation (ft above mean sea level)
River Level	390.32
Piezometer 1S – inside wall (northern-most pair)	388.78
Piezometer 1N – outside wall (northern-most pair)	388.25
Piezometer 2E – inside wall (north-central pair)	389.50
Piezometer 2W – outside wall (north-central pair)	387.89
Piezometer 3E – inside wall (south-central pair)	388.67
Piezometer 3W – outside wall (south-central pair)	387.83
Piezometer 4E – inside wall (southern-most pair)	389.20
Piezometer 4W – outside wall (southern-most pair)	388.61

Stormwater

Rain during the previous weekend caused some pooling of stormwater within and outside the exclusion zone. The accumulated stormwater was pumped from within the exclusion zone into the north modutank on the morning of May 3, 2004.

Slurry Mixing

Approximately 48 tons of bentonite powder were used to mix fresh slurry this week. The slurry, when pumped from the south holding pond to the open trench, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results generally meeting the specification.

Spoils Handling

During the week, numerous truck loads of spoils were transferred from the southern portion of the exclusion zone to the temporary stockpile area on top of the landfill. Spoils excavated from the shallow trench located at the south arm of the barrier wall alignment included debris of rubber materials which will not be used for backfill mixing. A bulldozer was used to level the spoils at the temporary stockpile area.

Barrier Wall Construction

Inquip continued excavation of the trench along the south arm of the barrier wall alignment with the hydraulic clamshell rig for deeper excavation and with the mechanical clamshell rig to clean the trench bottom.

As of May 7, the open trench was approximately 1,280 feet in length along the barrier wall alignment from station 6+60 towards station 19+40 (please refer to Solutia's map for locations).

Fresh bentonite slurry was pumped into the open trench as needed to keep the excavation open on four days of the week. Slurry samples were collected from the top and the bottom of the trench daily; fresh and trench slurry samples were tested for viscosity, density (unit weight), filtrate loss, pH and sand content during the week.

During the week, only one of the eight bottom trench slurry samples exceeded the viscosity specification. The sample was collected on the first day of the week, and the viscosity result was 106 seconds to pass through the Marsh Funnel (the specification is between 40 to 100 seconds). The viscosity results of fresh slurry samples were below the specification range on one day of the week and those of the top trench slurry samples were satisfactory. Note that Inquip's design engineer will send a response letter to address Solutia's notice of non-compliance (No. 4) entitled *Slurry Trench Viscosity Testing* dated April 20. The density results of the trench slurry were satisfactory, at least 20 pounds per cubic foot lower than the unit weight of the backfill materials. The results for filtrate loss, pH and sand content in all slurry samples generally met the requirements. (Note that a mechanical desander is on site, but is currently not in use.)

During the week, Inquip mixed and placed into the trench approximately 840 cubic yards of backfill materials. Backfill operations took place on three days during the week. The backfill consists of spoils with the addition of approximately 15 percent of clay and one percent of bentonite (from trench slurry) in dry weight. The backfill was tested by PSI for slump, unit weight and moisture content. All test results reviewed met the minimum requirements.

The bottom of the trench at and ahead of the backfill toe was cleaned using the clamshell rig prior to the backfill placement. Depth-to-bottom measurements were made every 10 linear feet of trench to ensure the bottom of the trench was at a consistent depth and on top of bedrock. These depth measurements were performed with the clamshell rig's instrumentation and confirmed in two locations manually with the downrigger (plumbob on wire). Two samples were collected by PSI with a clam sampler from the top of the placed backfill in the trench prior to backfill placement daily. These samples were visually checked to ensure that the backfill surface in the trench was clean and free of any sand.

During the week, the trench depths were generally measured once at the end of the day except for May 3, when an additional measurement was made in the morning. The afternoon trench depth measurements were made every 100 linear feet of trench, with 20-foot spacing of measurements on either side of the backfill toe. The trench depth measurements from the afternoon of May 7, after the backfill placement into the trench, are shown in Table 2. The trench profile is depicted in Graph 1, and is compared to the trench depth profile measured end of the previous week (April 30). Graph 2 shows the overall progress of the barrier wall construction.

Other Activities

Pangea was onsite, pretrenching at the north side of Site R to prepare for future barrier wall excavation. A small backhoe was used to excavate the barrier wall footprint to a maximum depth of ten feet to explore the underground utilities. The trench was backfilled later with soils/fly ash excavated from the pit.

Utilities encountered along the barrier wall alignment thus far on Riverview Road included a benzene line (six-inch in diameter, inactive), four water lines (two two-inch, one six-inch, and one 12-inch in diameter), one underground electricity line, one phone line, and one box culvert. The two-inch water line was partially removed by Rockhill personnel at a section across the barrier wall alignment. Confined space permits were issued by Solutia on two days of the week for the removal of the two-inch water line since the depth of the excavation pit was about six feet. The removal of the box culvert was completed by Pangea at the beginning of the week.

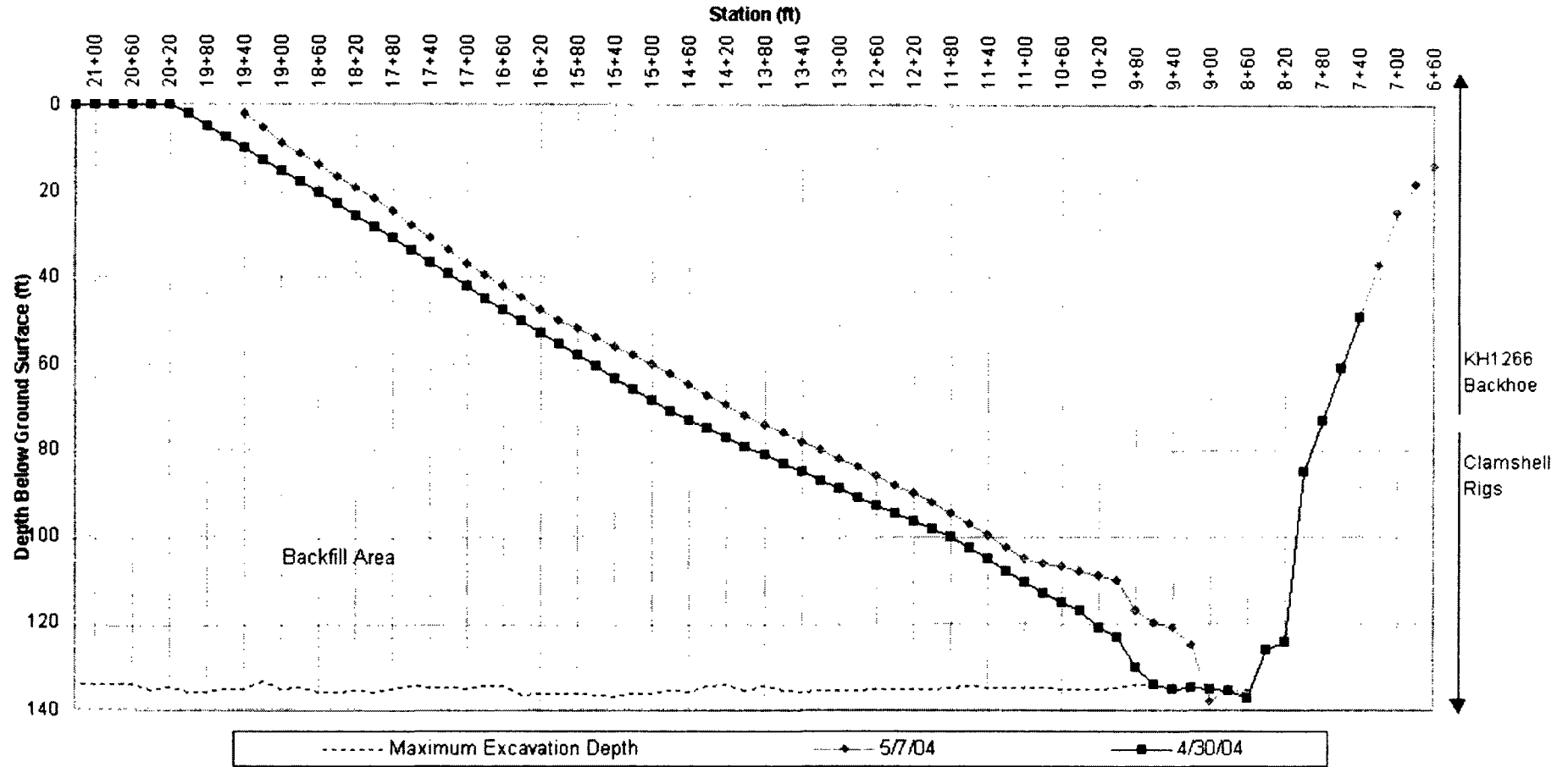
Lowry Electric, assisted by AmerenUE, converted an aboveground power line near the GMCS control building to an underground power line. A four-inch diameter conduit was installed to encase the power line after the conversion was complete. The underground electricity line near the security guard trailer was also encased with a two-inch diameter conduit. Note that electricity was shut off for approximately three hours because of the power line conversion.

Inquip continued building of the remote backfill mixing pad at the area near the fresh slurry mixing ponds, near station 21+00, using clean clay from offsite. When complete, backfill will be mixed in this area and subsequently transferred and placed into the trench at the northern open end of the trench where the backfill daylights. This procedure will preclude the necessity to mix backfill in the southern area of Site R where fly ash materials were previously encountered.

TABLE 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench – May 7, 2004 (PM)

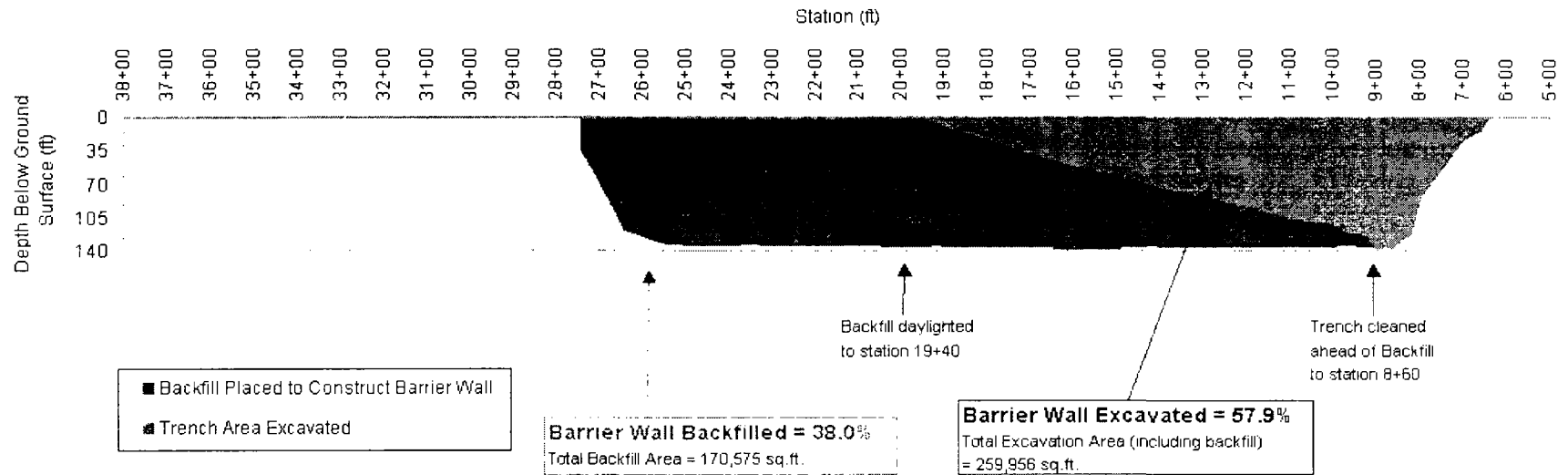
Station ID	Depth to bottom (ft below ground surface)
6+60	14
7+00	25
8+00	85
8+20	124
8+40	126
8+60	136
8+80	135
9+00	138
9+20	125
9+40	121
9+60	120
9+80	117
10+00	110
11+00	105
12+00	92
13+00	82
14+00	72
15+00	60
16+00	50
17+00	37
18+00	22
19+00	9
19+40	2

**Graph 1 - Weekly Barrier Wall Construction Progress
May 3 through May 7, 2004**



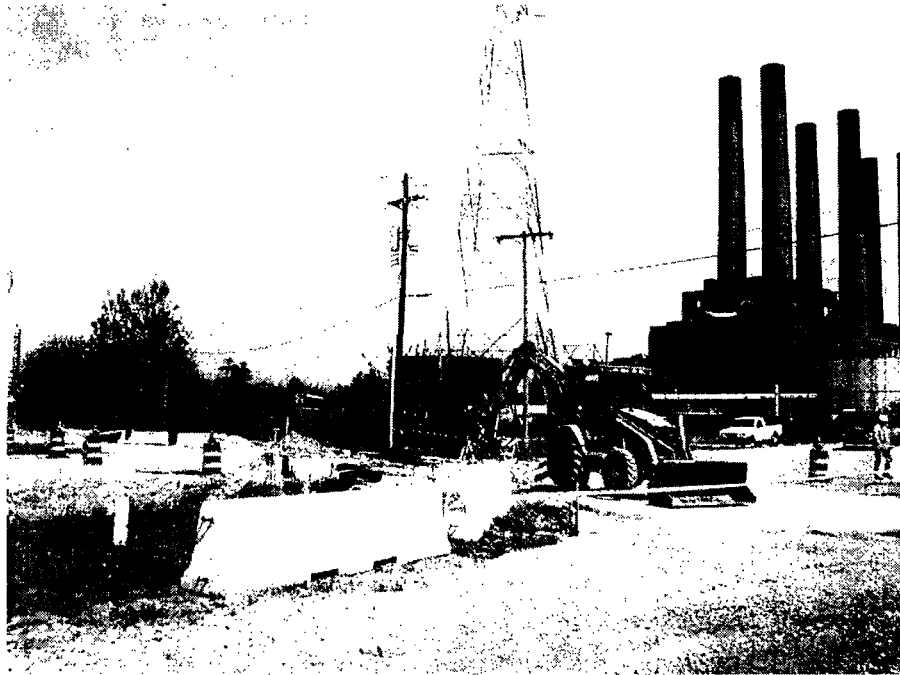
Note: Data plotted for the week through PM measurements on 4-30-04 and AM measurements on 5-7-04.
Some data points are interpolated between the available data points where trench depth measurements were read.

Graph 2 - Barrier Wall Construction Progress by May 7, 2004 (PM)



Note: Data plotted for week through PM measurements on 5-7-04.

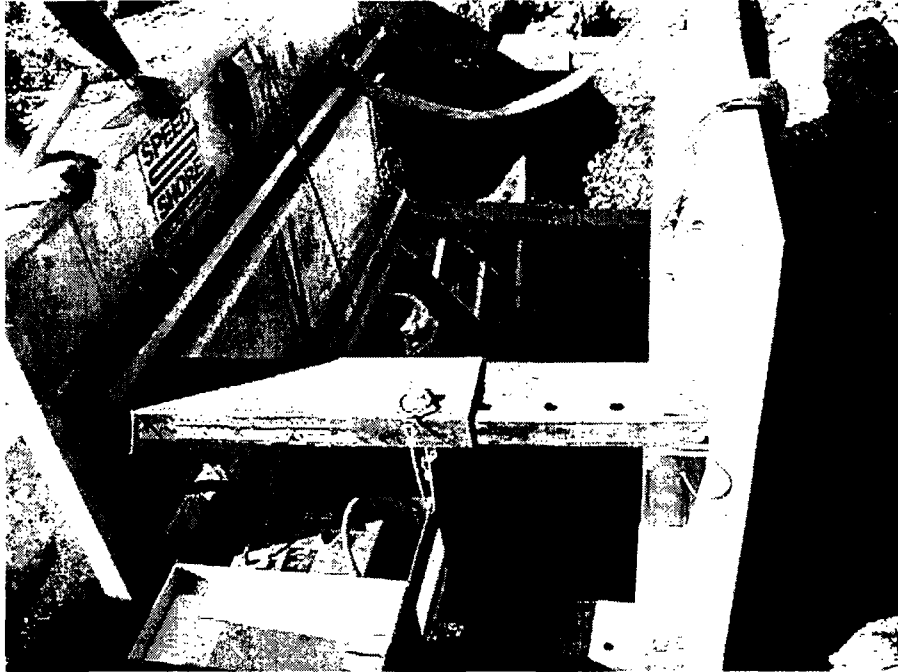
Photos from May 3 through May 7, 2004:



Pretrenching for underground utilities at the north leg of the barrier wall alignment (May 4, 2004).



Site preparation at the north portion of Site R (May 5, 2004).



Cutting off a 2-inch diameter water line across the Riverview Road (May 5, 2004).



Pretrenching for underground electricity line near the guard trailer (May 6, 2004).